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Crisis Management Model for Large Urban Agglomerations

Model zarządzania kryzysowego dużą aglomeracją miejską

Модель кризисного управления в большой городской агломерации

ABSTRACT

Purpose: Presentation of a model solution for a crisis management system for large urban agglomerations, assuming that such a model should form part of the current crisis management structure at the national and provincial levels.

Introduction: The intensive urbanisation of areas adjacent to large urban centres poses new challenges for the crisis management system. There are two types of agglomerations in Poland, namely monocentric agglomerations consisting of smaller towns concentrated around one large city (e.g., Warsaw agglomeration) and polycentric agglomerations consisting of several or more large cities (e.g., Silesian agglomeration). In each agglomeration – regardless of its type – there is a so-called “leading city”, which is the capital city of the province and at the same time the city with the district rights. An example of such a city is Warsaw, where the crisis management system has been functioning well for several years and it is different than in other agglomerations. Therefore, it seems reasonable to examine whether it would be possible to create a crisis management system model for other Polish agglomerations based on the Warsaw practices.

Methodology: A comparative analysis of selected agglomerations and crisis management frameworks across entities forming these agglomerations was used to find the baseline data for the model solution. The evaluation of the existing solutions at the Warsaw agglomeration level was obtained through a diagnostic survey conducted among the employees of local government administration.

Conclusions: The results of our diagnostic survey support the crisis management model adopted in Warsaw. The model solution for the crisis management system for large urban agglomerations may be based on solutions adopted and well tried in the Capital City of Warsaw. The model takes into account the creation of the Security and Crisis Management Office for the Agglomeration (BBiZKA) directly subordinate to the Mayor of the provincial city. A strong crisis management centre of the agglomeration would be a permanent element of BBiZKA, the Agglomeration Crisis Management Team would be the advisory element for the Mayor of the city. The Security and Crisis Management Office for the Agglomeration could be established at the expense of the liquidation of dispersed crisis management centres in the cities and municipalities forming the agglomeration. In the national crisis management system, the Crisis Management Centre of the Agglomeration would – as in the case of Warsaw – be subordinated to the Provincial Crisis Management Centre.

Keywords: crisis management, agglomeration, public administration, security

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ABSTRAKT

Cel: Przedstawienie rozwiązania modelowego dla systemu zarządzania kryzysowego dużą aglomeracją miejską, przy założeniu, że model taki powinien się wpisywać w aktualnie obowiązującą strukturę zarządzania kryzysowego na szczeblu kraju i województwa.

Wprowadzenie: Intensywna urbanizacja terenów przyległych do dużych ośrodków miejskich stwarza nowe wyzwania przed systemem zarządzania kryzysowego. W Polsce występuje dwa rodzaje aglomeracji. Aglomeracje monocentryczne składające się z mniejszych miejscowości skupionych wokół jednego dużego miasta (np. aglomeracja warszawska) oraz aglomeracje policentryczne składające się z kilku lub kilkunastu dużych miast (np. aglomeracja śląska). W każdej aglomeracji – niezależnie od typu – występuje tzw. „miasto wiodące”, którym jest stolica województwa i jednocześnie miasto na prawach powiatu. Takim miastem jest Warszawa, w której od kilku lat dobrze funkcjonuje – inny niż w pozostałych aglomeracjach – system zarządzania kryzysowego. Wydaje się zatem zasadne zbadanie, czy w oparciu o wzorce warszawskie nie można byłoby stworzyć modelu systemu zarządzania kryzysowego dla innych polskich aglomeracji.

Metodologia: W poszukiwaniu danych wyjściowych dla rozwiązania modelowego zastosowano analizę porównawczą wybranych aglomeracji i struktur zarządzania kryzysowego podmiotów tworzących te aglomeracje. Ocenę dotychczasowych rozwiązań na szczeblu aglomeracji warszawskiej uzyskano metodą sondażu diagnostycznego przeprowadzonego wśród pracowników administracji samorządowej.

Wnioski: Wyniki sondażu diagnostycznego przemawiają na korzyść przyjętego w Warszawie modelu zarządzania kryzysowego. Modelowe rozwiązanie dla systemu zarządzania kryzysowego dużą aglomeracją miejską może być oparte na rozwiązaniach przyjętych i sprawdzonych w Mieście Stołecznym Warszawie. Model uwzględnia utworzenie Biura Bezpieczeństwa i Zarządzania Kryzysowego Aglomeracji (BBiZKA) podległego bezpośrednio prezydentowi miasta wojewódzkiego. Stałym elementem BBiZKA byłoby silne Centrum Zarządzania Kryzysowego Aglomeracji, a elementem opiniodawczo-doradczym prezydenta miasta byłby Zespół Zarządzania Kryzysowego Aglomeracji. Biuro Bezpieczeństwa i Zarządzania Kryzysowego Aglomeracji mogłoby powstać kosztem likwidacji rozproszonych centrów zarządzania kryzysowego w miastach i gminach tworzących tę aglomerację. W ogólnokrajowym systemie zarządzania kryzysowego, Centrum Zarządzania Kryzysowego Aglomeracji byłoby – podobnie, jak w Warszawie – podporządkowane Wojewódzkiemu Centrum Zarządzania Kryzysowego.

Słowa kluczowe: zarządzanie kryzysowe, aglomeracja, administracja publiczna, bezpieczeństwo

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АННОТАЦИЯ

Цель: Представить модельное решение для системы кризисного управления в крупной городской агломерации, предполагая, что оно должно соответствовать нынешней структуре кризисного управления на национальном и воеводском уровнях.

Введение: Интенсивная урбанизация районов, прилегающих к крупным городским центрам, создает новые требования для системы кризисного управления. В Польше существуют два типа агломераций. Монополитические агломерации, состоящие из небольших городов, сосредоточенных вокруг одного большого города (например Варшавская агломерация) и поликентрические агломерации, состоящие из нескольких или более десяти крупных городов (например Силезская агломерация). В каждой агломерации – независимо от ее типа – существует так называемый „Ведущий город”, которым является столица воеводства (области) и в то же время город с повсюдными правами. Таким городом является Варшава, в которой уже несколько лет функционирует другая, чем в остальных агломерациях, система антикризисного управления. Поэтому представляется разумным рассмотреть возможность создания модели системы кризисного управления для других польских агломераций, на основе варшавского образца.

Методология: При поиске выходных данных для модельного решения был применен сравнительный анализ отдельных агломераций и структур кризисного управления субъектов, входящих в эти агломерации. Оценка существующих решений на уровне Варшавской агломерации была совершена с помощью диагностического исследования, проведенного среди работников органов местного самоуправления.

Выводы: Результаты диагностического исследования подтверждают обоснованность принятой в Варшаве модели кризисного управления. Модельное решение для системы кризисного управления в крупной городской агломерации может основываться на решениях, которые приняты и проверены в столице (Варшаве). Модель учитывает создание Бюро безопасности и управления кризисными ситуациями (BBiZKA), непосредственно подчиненного мэру города воевodstwa. Сильным элементом BBiZKA стал бы Центр кризисного управления агломерацией. Консультативным органом президента города была бы Комиссия кризисного управления агломерации. Бюро безопасности и кризисного управления может быть создано за счет ликвидации разрозненных центров кризисного управления в городах и муниципалитетах, входящих в эту агломерацию. В национальной системе кризисного управления Центр кризисного управления агломерации, подобно как в Варшаве, находился бы в подчинении Воеводского центра кризисного управления.

Ключевые слова: кризисное управление, агломерация, государственное управление, безопасность

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Introduction

Changes in the security environment related to the socio-economic development of the country, including the rapid urbanisation of areas adjacent to large urban and industrial centres, have led to the formation of monocentric and polycentric agglomerations. Agglomerations develop qualitatively and spatially, as they are a functional phenomenon which is difficult to be confined within the rigid boundaries of basic territorial division units. Common interests, and economic, social and cultural ties, encourage a common effort and provide a strong basis for the solidarity of care to ensure a secure existence and development, i.e., ensuring safety to all residents of the agglomeration. In Polish conditions, this task is not easy, as it requires re-modelling

of the existing security management system, which is rigidly based on the principle of the primacy of the territorial system.

A key role in security management is played by crisis management systems operating on the basis of the various levels of the administrative division, which seems to be a reasonable solution, for example due to the assignment of responsibilities to competent public authorities [1]. A specific exception in this system is the organisation of crisis management in cities with district rights, e.g., in the Capital City of Warsaw, where the tasks assigned in the *Act on Crisis Management* to the Starosta [district governor], the Mayor of the City and the Wojt [municipality head] are carried out by one entity subordinate to the Mayor of the City. In the capital city, such entity is the Security and Crisis Management Office, whose activity is highly rated by experts and residents.

Assuming that agglomerations in Poland operate in similar conditions and face similar problems in the sphere of security, it seems possible to use a common crisis management model. In the organisational system, such a model should fit well into the complex administrative structure of the agglomeration. On the other hand, in the functional system, it should take into account effective use of the potential of the central and local government administration as well as services and institutions responsible for crisis management in the agglomeration and use of the synergy effect resulting from combining their efforts. Obviously, differences between the above-mentioned types of agglomeration should be taken into account. For a polycentric agglomeration, the criteria for the selection of the leading city and its significance within the agglomeration's security management system will be important. From a scientific point of view, this entails some flexibility in crisis management rules – by liberalising the principle of the primacy of the territorial system and the principle of the responsibility of public authorities in order to strengthen the principle of the primacy of one-man management in the case of large urban agglomerations.

A comparative analysis of agglomerations and crisis management systems

In order to solve the main research problem presented in the question **to what extent is it possible to create a model solution for a crisis management system for large urban agglomerations in Polish conditions and what shape could such a solution have?** we needed to analyse the organisational frameworks of crisis management in various agglomerations and to answer a number of additional questions, the first of which concerned the definition of an agglomeration.

The term 'agglomeration' comes from the Latin language, where *agglomeratio* means accumulation. It is assumed in the doctrine that an urban agglomeration is a morphological unit forming a coherent set of interconnected settlement units, created as a result of the concentration of buildings and development [2]. Agglomerations are usually formed by settlement units of separate administrative cells. In the case of urban planning [3], this term is understood as an area of intense urban development characterised by a high density of population, temporarily or permanently residing on the territory in question. Agglomerations are characterised by a considerable flow of persons and goods as well as the exchange of services. The common nomenclature assumes that an agglomeration is a concentration of neighbouring cities and villages, which constitute an interconnected system by integrating or complementing the various forms of infrastructure across these villages and making mutual use of the potential and resources available to these villages. Jerzy Parysek claims that an *agglomeration* is "a functionally coherent metropolitan system comprising many settlement units connected with strong relations involving the movement of people, goods, money and information. It consists of a hub and lower central units called suburban zones" [4].

See below for the results of our review of organisational frameworks of the crisis management system for cities forming polycentric agglomerations (Silesia and Tri-City) and

monocentric agglomerations (Poznań, Wrocław, and Krakow; solutions adopted in Warsaw are the result of a separate analysis).

Research has shown that depending on the size and status of the city (urban municipality or city with district rights), the crisis management system may be extended accordingly. In the case of cities with district rights, the situation was that irrespective of district structures, there were frameworks specific only for a given city. Such a situation occurred when a given district included many towns, as in the case of the Department of Security and Crisis Management of the Gdańsk District, where tasks were carried out by individual Crisis Management service posts functioning in particular towns within the district. In addition to the above, in Gdańsk itself there was also a Department of Safety and Crisis Management, which included the Municipal Centre for Crisis Management and the City Crisis Management Team. It is worth noting that in the case of smaller towns with district rights (especially in the case of the Silesian Province), urban and district crisis management systems functioned in parallel, with no additional distinction being made between centres and teams within the crisis management system. This was the case with Bytom, where the City Security Office operated, and at the same time the District Crisis Management Centre and the Crisis Management District Team were functioning. In Sosnowiec, Świętochłowice, and Gliwice, where next to the district structures there was a city structure under the name of the Rescue Centre in Gliwice. In such cities as Jaworzno, Dąbrowa Górnica, Piekarz and Siemianowice Śląskie the city structure was a bit more developed, as the Crisis Management Centre operated within the framework of the urban structure, but the Crisis Management team remained at the district level.

To sum up, the structures of Crisis Management systems were developed to match the size of the city, its legal status, the degree of urbanisation of the district, and the permeability of the borders of individual cities and towns. It is worth noting that while at the level of government administration in the field – i.e., at the provincial level – this structure is always clear, manifesting itself in the functioning of the Department of Security and Crisis Management, together with the Provincial Crisis Management Centre and the Crisis Management Team; at the district level, and even more at the level of municipalities, one may notice discrepancies in the nomenclature and tasks of individual structures. At the same time, it should be highlighted that regardless of these regional differences, local crisis management structures fully implement tasks assigned to local governments by the legislator.

The Crisis Management System of the Capital City of Warsaw as a starting point for developing a model solution

Based on the assumption that the Warsaw system could be the starting point for a solution with regard to the crisis management model for any urban agglomeration, it has been subject to appropriate studies. Empirical surveys conducted among the employees of the local-government administration of the Capital City of Warsaw allowed us to determine the opinion of respondents on the functionality and possible need for changes in the current system. The survey was conducted on a representative group of 3711 people,

out of 6287 employees of the City Hall of the Capital City of Warsaw and selected districts. As a result, 783 questionnaires were properly completed in case of which 87 respondents (11.7%) declared that their jobs were directly related to the implementation of security tasks. Replies of those persons were treated as expert opinions.

When asked a single-choice question "Do you see a need for changes in the current system of crisis management of the Capital City of Warsaw?" 14.4% of all the respondents did not see a need for changes in the current system and 34.1% indicated that only a few corrections were needed. Therefore, 48.5% of all the respondents believed that the current system fulfilled its essential role as regards crisis management. According to them, only some small adjustments could be made in order to improve the functionality of the current system, without the need for comprehensive restructuring.

The total restructuring of the crisis management system in Warsaw was supported by 11.9% of respondents, who considered the current solutions to be incorrect and not meeting the requirements. Unfortunately, 39.6% of the respondents indicated an answer "I don't know/ it is difficult to say", which is probably due to their lack of knowledge regarding the examined issues. In addition, it should be highlighted that considering the total number of respondents, such a large number of uninformed answers should not be surprising, as a large part of them have nothing to do with security tasks.

In the case of managers, 21.7% saw no need for changes in the current system and 38.8% proposed only a few adjustments, which means that 60.7% of them gave a positive assessment of the current crisis management system. Only 13.2% of the respondents answered "Yes, it should be thoroughly restructured", and 26.4% of the respondents selected the answer "I don't know/ it's difficult to say".

Taking into account civil servants, assistant personnel, and other posts, a negative response to the need for changes was provided by 13.0%, and a response covering minor adjustments was provided by 33.2%, giving the final result of 46.2%. Negative opinions on the system and the need for changes were expressed by 11.6% of the respondents. As many as 42.2% of the respondents did not assess the current Warsaw system and indicated the answer "I don't know/ it is difficult to say".

In this regard, the opinion of persons whose positions are directly related to the implementation of safety tasks, i.e., experts, seems particularly important. Out of 87 of them, 22 did not indicate the need for changes and 41 saw the need for introducing only minor adjustments, which means that in total 72.4% of experts evaluated of the crisis management system in Warsaw in positive terms. Only 13 persons (15%) assessed the current system as poor and proposed a complete redevelopment of it, while 11 people, i.e., 12.6% of the respondents, indicated the answer "I don't know/ it's difficult to say".

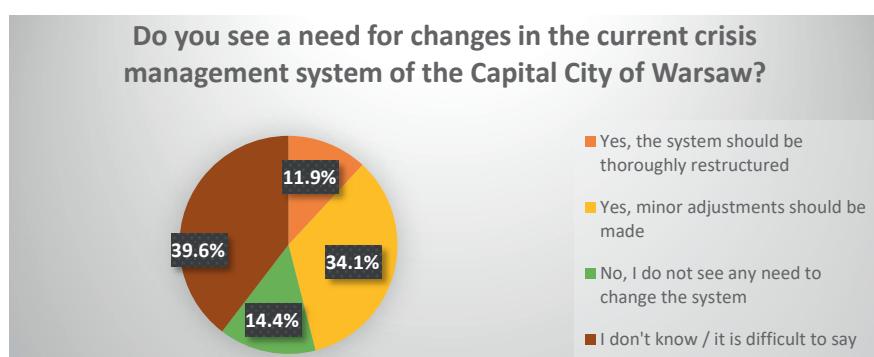


Figure 1. Existence of the need for changes in the current crisis management system for Warsaw

Source: Results of own surveys concerning the whole group of respondents.

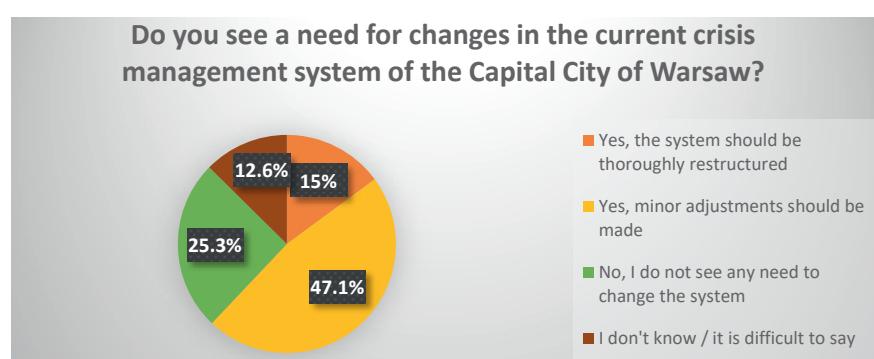


Figure 2. Existence of the need for changes in the current crisis management system for Warsaw

Source: Results of own studies concerning the group of respondents directly implementing security tasks.

When asked the next single-choice question "Do you think that it is possible to transfer the solutions of the Capital City of Warsaw to other large urban agglomerations in Poland?" 6.0% of all respondents answered "Definitely yes" and 37.0% answered

"Rather yes". Therefore, 43.0% of all respondents believed that it was possible to transfer solutions of the current crisis management system of the Capital City of Warsaw to other large urban agglomerations in Poland.

CASE STUDY – ANALYSIS OF ACTUAL EVENTS

Respondents accounting for 42.9% of the total number of respondents did not assess the possibility of transferring the system solutions (most likely due to their lack of relevant knowledge) and only 2.8% of the respondents believed that this was definitely not possible. 11.2% of the respondents indicated the answer "Rather not". In total, 14% of the respondents believed that the proposed solution was not acceptable.

In the case of managers, 10.1% answered "Definitely yes" and 39.5% answered "Yes", which represents 49.6% of positive opinions with respect to solutions functioning in Warsaw and the possibility of transferring them to crisis management systems in other large Polish agglomerations. As many as 34.9% of respondents had difficulties with answering the question, 1.6% of respondents provided clearly negative opinions and 14% of respondents provided rather negative opinions. Therefore, 15.6% of respondents did not consider it possible to transfer the system to other Polish cities.

Among the respondents working as civil servants, assistants or on other positions, the "Definitely yes" answer was

provided by 5.2%, and the "Yes" answer was provided by 36.5%, which gives the final result of 41.7% of positive opinions on the possibility of transferring the Warsaw system to other cities. Unfortunately, as many as 44.5% of respondents answered "I don't know/ it is difficult to say". Definitely negative evaluations of system solutions in the Capital City of Warsaw were given by 3.1% of the respondents, and rather negative evaluations were given by 10.7%. As a result, 13.8% of the surveyed civil servants considered the transfer of experience to be inadvisable.

In this regard, the opinion of those persons whose positions are directly related to the execution of safety tasks is of particular importance. Out of 87 of them, 13 answered "Definitely yes" and 41 answered "Yes", which in sum represents 62.1% of positive assessments. The "I don't know/ it is difficult to say" answer was provided by 20 respondents, i.e., 23.0% of the respondents, while 2 persons (2.3%) negatively assessed the possibility of transferring Warsaw solutions to other agglomerations, and 11 respondents (12.6%) replied "Rather not".



Figure 3. Possibility of transferring the solutions used in the Capital City of Warsaw to crisis management systems in other large urban agglomerations in Poland?

Source: Results of own surveys concerning the whole group of respondents.



Figure 4. Possibility of transferring the solutions used in the Capital City of Warsaw to crisis management systems in other Polish agglomerations

Source: Results of own studies regarding the group of the respondents directly implementing security tasks.

The next single-choice question was "Who in the office, in your opinion, should carry out tasks related to the security of the agglomeration?" The majority of votes, i.e., 56.6%, were given to employees of units responsible for crisis management, supported, if necessary, by employees of other units in the office. A solution assuming that all employees of the office, within the scope of their competences and capabilities,

should perform tasks related to the security of the agglomeration, was supported by 21.5% of respondents. 17.8% of respondents believed that these tasks should be performed only by the employees of the units responsible for crisis management, as they were considered best prepared for these tasks. Only a few respondents (4.1%) answered "I don't know/ it's difficult to say".

The responses of managers were slightly different from those in general provided by the surveyed officials. In their opinion, tasks in the field of urban agglomeration security should be performed by the employees of the units responsible for crisis management, supported, if necessary, by the staff from other units within the office – 60.5%. As many as 27.1% of respondents indicated that all employees of the office should, within the scope of their competences and capabilities, perform these activities, and 11.6% of respondents believed that these activities should be performed only by the personnel of the units responsible for crisis management as they were considered best prepared for these tasks. Only one person answered "I don't know/ it is difficult to say".

Taking into account officials, assistants and other positions, 55.8% of the respondents suggested the employees of the units responsible for crisis management matters, supported, if necessary, by the staff from other units within the office. 20.3% of the respondents indicated all employees of the office within the scope of their competences and capabilities, and 19% of the

respondents answered "Only employees of the units responsible for crisis management, as they are best prepared for these tasks". In the case of 4.9% of the respondents, the answer was "I don't know/ it is difficult to say", probably due to their lack of competence in this area.

In this respect, the opinion of experts, i.e., persons whose position is directly related to the performance of security tasks, is particularly important. Out of the 87 surveyed officials, as many as 53 respondents indicated that tasks related to ensuring the security of a large urban agglomeration should be performed by the personnel of the units responsible for crisis management, supported, if necessary, by the staff from other units within the office (61.0%). 25 persons (28.7%) believed that this duty was incumbent on all the employees in the office, within the scope of their competences and capabilities. Only 7 surveyed persons believed that these tasks belonged exclusively to the staff of units specialising in crisis management, as they were believed to be best prepared for these tasks (8%). Two persons answered "I don't know/ it's difficult to say".

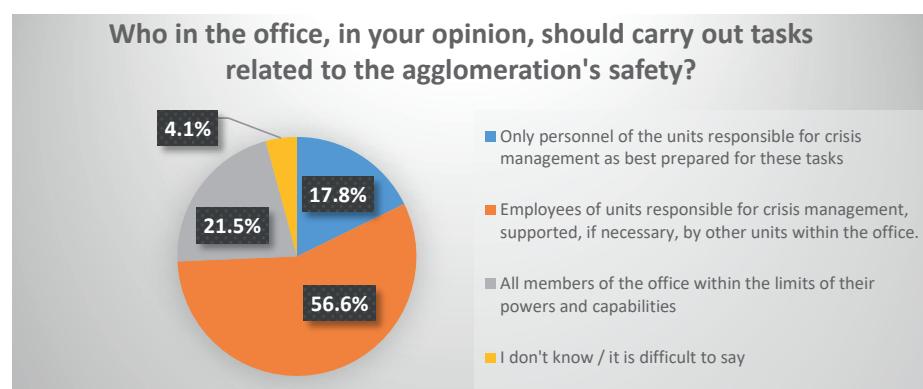


Figure 5. Employees performing tasks related to agglomeration's security – opinions of respondents

Source: Results of own surveys concerning the whole group of respondents.

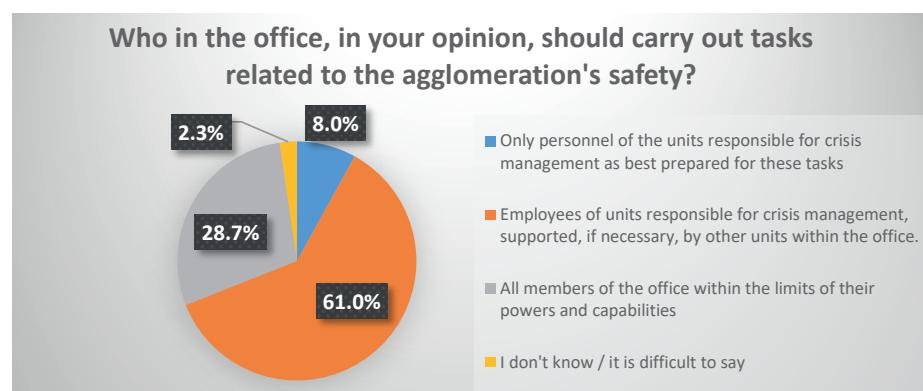


Figure 6. Employees performing tasks related to agglomeration's security – opinions of respondents

Source: Results of own research on the group of respondents involved in the implementation of security tasks.

Some general conclusions can be extrapolated from the above survey results, namely that almost half of respondents positively assess the current crisis management system operating in the Capital City of Warsaw. After minor adjustments these solutions could be transferred to other large Polish agglomerations, which would solve the problem of an

efficient and satisfactory management process at the time of crisis. Powers to carry out tasks related to crisis management should be devolved mainly on the staff of units specialising in this field, supported, where necessary, by the staff from other units within the office, which seems to be justified and rational.

Unfortunately, within the total number of the respondents there is a significant proportion of respondents who answered "I don't know it/ it's difficult to say", which indicates a high number of people who lack competence and are not interested in security issues.

It should be added that the results of the research depend first of all on what group provides the answer, whether it was the total number of the respondents, people occupying managerial positions, civil servants or persons directly involved in the implementation of tasks for the security of residents. The most reliable data seem to come from the last group.

Crisis management system concept for large urban agglomerations

Current solutions in the area of crisis management at various levels of public administration fit well into the state security system. These are "typical" solutions for provinces, districts and municipalities; therefore, it is difficult to require that they meet the expectations of society organised in a different way. An example of such an organisation is a large urban agglomeration, where centres of different sizes are functionally interconnected; hence common problems related to security assurance occur within the agglomeration as a whole.

In order to respond to emerging challenges in the area of agglomeration security, and in particular to optimise the crisis management frameworks of large urban agglomerations, it seems appropriate to carry out an in-depth analysis of the operating conditions of such frameworks. First of all, consideration should be given to the general and universal determinants that emerge for all organisational structures, and then the detailed determinants for the structure of crisis management systems in large urban agglomerations should be identified.

According to the management theory, the structure of each organisation should be a framework for organisational activities, both management and executive ones, and should take into account the specific nature of internal processes and external impacts. It should also fulfil the function of a regulator of activities of particular components of the system in a given organisation to ensure effective implementation of its objectives. The structure of an organisation should facilitate the achievement of a certain level of implementation of the needs of its individual components. Moreover, it should neutralise turbulence in the external environment and temporary imperfections of its internal elements. Each structure has three dimensions: 1) formalisation, 2) specialisation, and 3) coordination. The universal determinants of each organisational framework are: mission and strategy of the organisation's operation, size and complexity of its functioning, previous experience, area (scope of activity), technology, potential, complexity and uncertainty of the environment, cultural complexity and organisational culture, and leadership [5].

Generally, the structure of the organisation reflects the functions and relationships formalising the mission of its individual components, and the principles of cooperation between them within the organisation in order to achieve the assumed objectives [6].

On the other hand, crisis management structures of large urban agglomerations should take into account the specific

nature of such large collective systems and their individual entities, i.e., the inhabitants of the agglomeration. In particular, the concept of a model solution for the safety system of mono- and polycentric agglomerations should take into account:

- formal and legal conditions,
- social expectations in terms of security,
- possibility of performing tasks (expectations),
- types and nature of risks,
- field conditions,
- population structure,
- deployment of critical infrastructure,
- financial capacity,
- capacity of the civil rescue system,
- capacity of other security systems.

The concept of a model solution for a crisis management system for large urban agglomerations should take into account the structure of public administration and the shape of the state's crisis management system, as these conditions will include new solutions. The inclusion of the organisational structure of the crisis management system in the agglomeration into the existing frameworks is also a necessary condition for the implementation of tasks resulting from the Act on crisis management, and in particular the tasks envisaged for local-government administration authorities.

Analyses of the current system solutions in the area of crisis management have shown that there are units or individual positions on particular levels of local-government administration that perform security tasks. In particular, these are the basic tasks of Starosts [district governors], city mayors and heads of municipalities, as defined in the *Crisis Management Act*, and are confined to the administrative boundaries of a commune, city or municipality. It is worth noting that these tasks are duplicated and overlap each other, and their implementation is a considerable burden taking into account the modest capacity of local governments. Therefore, the main objective of the suggested concept is to consolidate the efforts of local-government administration authorities in implementing security tasks. It is worth noting that such consolidation would concern not only the administration but also the executive subsystem, i.e. the forces and means at the disposal of crisis management bodies.

The basic question that arises from the presented idea is where should the central authority managing the security of the agglomeration be located? This question is particularly important in the case of polycentric agglomerations, where there are several or more entities (cities) of similar size and potential. This problem practically does not concern monocentric agglomerations, where there is one dominant urban centre. In Polish conditions, in both monocentric and polycentric agglomerations there is a provincial city with district rights, which is the strongest centre and most often it is located centrally within the agglomeration. In addition to this type of urban centre, there are also three types of entities forming the agglomeration.

In total, there may be four types of entities within the agglomeration.

"A" – the capital city of the province and at the same time the seat of both the Voivode [province governor] and the Marshal of the province. It is worth noting that in the context of tasks

envisioned for local-government administration in the Act on Crisis Management, the Marshal of the province has very limited powers and the Voivode is responsible for crisis management. And in this article we do not consider the whole province but the agglomeration focused around the provincial city, hence – from the point of view of the main research problem – the most important thing is that it is a city with district rights, where the mayor of the city carries out simultaneously the tasks envisaged for the Starost [district governor].

“B” – district city being the capital city of the district – municipal district which consists of cities – municipalities. Among the statutory crisis management units, the most common is one combined centre which carries out the tasks of the city and the district.

“C” – district city being the capital city of the district – township district. In this case, the rule is that there is a permanent crisis management unit. It is a joint centre, carrying out tasks provided for in the Act on Crisis Management for the city and the district.

“D” – city-municipality or a municipal locality without municipal rights, forming the basic level of local-government administration. They are part of the district – municipal district. Crisis management teams are set up at the municipal level, while crisis management centres do not usually exist and tasks are assigned to individual officials.

The “A” entity, as the strongest urban centre, will be the obvious leader among the entities forming the agglomeration. It should be emphasised that, from the point of view of

local-government administration, it is not important that it is the capital of the province. As mentioned above, as a representative of government administration, the Voivode is responsible for overall crisis management in the whole province, also in cities and municipalities not included in the agglomeration; hence the Voivode’s role is not taken into account in the concept of agglomeration management.

The proposed concept of the crisis management system is largely based on solutions adopted and tested in the Capital City of Warsaw. Since the effectiveness of such a solution has been confirmed by empirical studies and our respondents, the model of capital city crisis management can be transposed to other agglomerations, the concept is to establish the Security and Crisis Management Office (BBiZKA) subordinate to the mayor of the leading city (“A”). The composition of BBiZKA would cover a strong Crisis Management Centre of the Agglomeration created at the expense of eliminating this type of unit in the other entities forming the agglomeration. In the remaining large cities, the Crisis Management Centre of the Agglomeration would have its Delegations and in smaller towns and municipalities – representatives, as necessary. At the agglomeration level – similarly to Warsaw – the Agglomeration Crisis Management Team would be established. As mentioned in the assumptions for the concept, such a structure would have to fit into the national crisis management system, hence Crisis Management Centre of the Agglomeration was subordinated to the province structure (Figure 7).

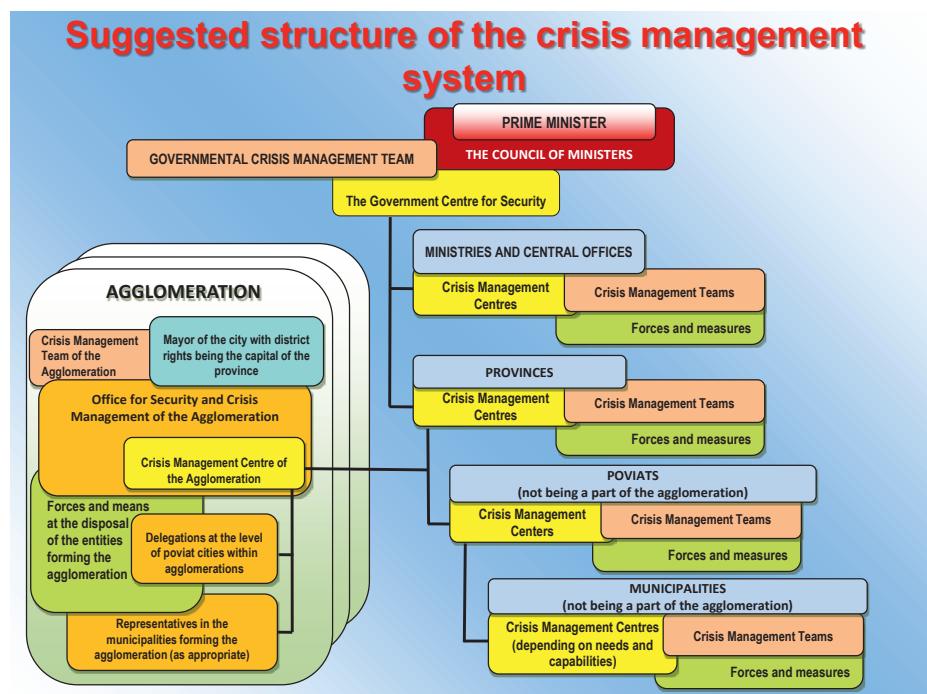


Figure 7. Crisis Management System of the Agglomeration in the Polish national system structure

Source: Own elaboration.

This is justified for at least two reasons: 1) in Poland there are no agglomerations extending beyond the borders of one province; 2) The responsibility of the lowest level of government administration, i.e., Voivode for ensuring safety in the province is maintained.

The presented solutions would require amendments to the Act on crisis management and to some other regulations, especially those governing the responsibility of Starosts [district governors], city mayors and heads of the municipalities forming the agglomeration [7].

Summary

The main research problem, defined by the subject of the presented article, was described in the question concerning the possibility of creating a model solution for a crisis management system of large urban agglomerations in Polish conditions. In other words, is it possible to develop common solutions in the form of a comprehensive crisis management model, taking into account the specific nature and diversity of individual urban agglomerations? An empirical research method in the form of a diagnostic survey was used to answer this question, and the technique of a single-choice questionnaire was used within this method. The examination was carried out on the officers of the Capital City of Warsaw, both those with general competencies and those directly related to crisis management in the Warsaw agglomeration.

The first question concerned the need for introducing changes to the current Crisis Management system of the Capital City of Warsaw, to which the majority of officials responded negatively, opting only for minor modifications and not for a thorough reconstruction of the system as a whole. The obtained results allow us to believe that the majority of civil servants believe that the crisis management system of the Capital City of Warsaw is working flawlessly, and only small adjustments could be considered to improve the generally efficient functionality.

The second question was directly related to the opinions of the respondents concerning the possibility of transferring solutions related to crisis management in the Capital City of Warsaw to the crisis management systems in other urban agglomerations. Both the majority of officials and crisis management staff were in favour of the possibility of transferring these solutions. Majority of officers positively assessed the crisis management system of the Capital City of Warsaw to such an extent that they saw no obstacles to implementing the solutions of the Capital City in other agglomerations.

Finally, the third question concerned the indication of the entity (or entities) responsible for managing and coordinating the crisis management system. This question is important as it allowed us to illustrate the opinions of officials about the current functionality of the municipal crisis management structures. It follows from the collected answers that a vast majority of both officials and experts believe that appropriate structures responsible for crisis management of the Capital City of Warsaw should be supported by other civil servants on an ongoing basis.

The concept of a model for the crisis management system for large urban agglomerations provides for the consolidation of efforts at the level of the so-called "leading city" which in Polish conditions is the capital of a province. The idea accompanying the implementation of this concept would be to optimise crisis management structures according to real needs, while avoiding the duplication of tasks across individual organisational units operating in the same area of responsibility. At the same time, the aforementioned optimisation would also manifest itself in a wider use of support from other organisational units of local government administration. This, in turn, would facilitate the

organisation of a clear structure and responsibilities, as well as subordination to decision-makers at the appropriate level for a given agglomeration, ending with a Voivode.

The authors express their hope that the article will contribute to broadening the knowledge in the field of crisis management and, as a consequence, to increasing the level of security in dynamically developing Polish agglomerations.

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